

CLAIMS

We claim:

1. A concealed storage system comprising:
 - a. an encased chamber below a floor of a structure having an opening in said floor above the chamber;
 - b. a support frame fixed in the chamber;
 - c. a liftable frame within the support frame; said liftable frame further comprising a top deck and a bottom deck;
 - d. a mechanism for vertically raising and lowering the liftable frame through the opening in the floor.
2. The concealed storage system of claim 1 wherein the top deck of the liftable frame further comprises an emergency exit hatch.
3. The concealed storage system of claim 1 wherein the mechanism for raising and lowering the liftable frame through the opening in the floor further comprises a motor driving a roller chain and sprocket assembly, at least one lifting screw shaft driven by the roller chain and sprocket assembly and one ball screw nut affixed to the liftable frame for each lifting screw shaft wherein said ball screw nut is driven in a vertical direction by the lifting screw shaft.
4. The concealed storage system of claim 2 wherein the mechanism for raising and lowering the liftable frame through the opening in the floor further comprises a motor driving a roller chain and sprocket assembly, at least one lifting screw shaft driven by the roller chain and sprocket assembly and one ball screw nut affixed to the liftable frame for

each lifting screw shaft wherein said ball screw nut is driven in a vertical direction by the lifting screw.

5. The concealed storage system of claim 3 wherein the mechanism for raising and lowering the liftable frame through the opening in the floor further comprises a primary drive shaft being rotated by the motor through a belt and pulley assembly, said primary drive shaft driving the roller chain and sprocket assembly.

6. The concealed storage system of claim 4 wherein the mechanism for raising and lowering the liftable frame through the opening in the floor further comprises a primary drive shaft being rotated by the motor through a belt and pulley assembly, said primary drive shaft driving the roller chain and sprocket assembly.

7. The concealed storage system of claim 1 wherein the top deck of the liftable frame is of size and shape to cover the opening in the floor when the liftable frame is vertically lowered fully in the support frame and wherein the bottom deck of the liftable frame is even with the floor when the liftable frame is vertically raised fully in the support frame.

8. The concealed storage system of claim 7 wherein the top deck of the liftable frame further comprises an access hatch for emergency entrance and exit.

9. The concealed storage system of claim 8 wherein the liftable frame further comprises a front end, a rear end, a right side and a left side, and further comprises a safe with a locking door mounted between the bottom deck and the upper deck at the rear end of the liftable frame with the locking door facing the rear end of the liftable frame and accessible from the floor at the rear end of the liftable frame when the liftable frame is vertically raised fully in the support frame and the bottom deck is even with the floor, and

further comprising a storage compartment with a hinged door mounted between the bottom deck and the upper deck at the rear end of the liftable frame with the hinged door facing the rear end of the liftable frame and accessible from the floor at the rear end of the liftable frame when the liftable frame is vertically raised fully in the support frame and the bottom deck is even with the floor.

10. The concealed storage system of claim 9 wherein the mechanism for raising and lowering the liftable frame through the opening in the floor further comprises a motor driving a roller chain and sprocket assembly, at least one lifting screw shaft driven by the roller chain and sprocket assembly and one ball screw nut affixed to the liftable frame for each lifting screw shaft wherein said ball screw nut is driven in a vertical direction by the lifting screw.

11. The concealed storage system of claim 10 wherein the mechanism for raising and lowering the liftable frame through the opening in the floor further comprises a primary drive shaft being rotated by the motor through a belt and pulley assembly, said primary drive shaft driving the roller chain and sprocket assembly.

12. The concealed storage system of claim 7 wherein the bottom deck is of size and shape to receive and store rolling equipment from the floor when the bottom deck is even with the floor.

13. The concealed storage system of claim 12 wherein the top deck of the liftable frame further comprises an access hatch for emergency entrance and exit.

14. The concealed storage system of claim 12 wherein the liftable frame further comprises a front end, a rear end, a right side and a left side, and further comprises a safe with a locking door mounted between the bottom deck and the upper deck at the rear end

of the liftable frame with the locking door facing the rear end of the liftable frame and accessible from the floor at the rear end of the liftable frame when the liftable frame is vertically raised fully in the support frame and the bottom deck is even with the floor, and further comprising a storage compartment with a hinged door mounted between the bottom deck and the upper deck at the rear end of the liftable frame with the hinged door facing the rear end of the liftable frame and accessible from the floor at the rear end of the liftable frame when the liftable frame is vertically raised fully in the support frame and the bottom deck is even with the floor.

15. The concealed storage system of claim 14 wherein the mechanism for raising and lowering the liftable frame through the opening in the floor further comprises a motor driving a roller chain and sprocket assembly, at least one lifting screw shaft driven by the roller chain and sprocket assembly and one ball screw nut affixed to the liftable frame for each lifting screw shaft wherein said ball screw nut is driven in a vertical direction by the lifting screw.

16. The concealed storage system of claim 15 wherein the mechanism for raising and lowering the liftable frame through the opening in the floor further comprises a primary drive shaft being rotated by the motor through a belt and pulley assembly, said primary drive shaft driving the roller chain and sprocket assembly.

17. The concealed storage system of claim 1 wherein the mechanism for raising and lowering the liftable frame through the opening in the floor comprises at least one control switch within the liftable frame and at least one control switch external to the liftable frame.

18. A method for creating a concealed storage system comprising the steps of:

- a. excavating and encasing a chamber below a floor in a structure with an opening in said floor;
- b. fabricating and fixing a support frame in the chamber;
- c. fabricating and installing a liftable frame with a top deck and a bottom deck to travel vertically in the support frame;
- d. providing and installing a mechanism for vertically raising and lowering the liftable frame in the support frame through the opening in the floor.

19. The method of claim 18 further comprising the step of installing an access hatch in the top deck for emergency entrance and exit.

20. The method of claim 19 further comprising the step of fabricating and installing a liftable frame wherein the top deck of the liftable frame is of size and shape to cover the opening in the floor when the liftable frame is vertically lowered fully in the support frame and wherein the bottom deck of the liftable frame is even with the floor when the liftable frame is vertically raised fully in the support frame.

21. The method of claim 20 further comprising the step of fabricating and installing a liftable frame wherein the liftable frame comprises a front end, a rear end, a right side and a left side, and further comprises a safe with a locking door mounted between the bottom deck and the upper deck at the rear end of the liftable frame with the locking door facing the rear end of the liftable frame and accessible from the floor at the rear end of the liftable frame when the liftable frame is vertically raised fully in the support frame and the bottom deck is even with the floor, and further comprising a storage compartment with a hinged door mounted between the bottom deck and the upper deck at the rear end of the liftable frame with the hinged door facing the rear end of the liftable frame and

accessible from the floor at the rear end of the liftable frame when the liftable frame is vertically raised fully in the support frame and the bottom deck is even with the floor.

22. The method of claim 20 wherein the bottom deck is of size and shape to receive and store rolling equipment from the floor when the bottom deck is even with the floor.

23. The method of claim 18 wherein the mechanism for raising and lowering the liftable frame through the opening in the floor further comprises a motor driving a roller chain and sprocket assembly, at least one lifting screw shaft driven by the roller chain and sprocket assembly and one ball screw nut affixed to the liftable frame for each lifting screw shaft wherein said ball screw nut is driven in a vertical direction by the lifting screw.

24. The method of claim 23 wherein the mechanism for raising and lowering the liftable frame through the opening in the floor further comprises a primary drive shaft being rotated by the motor through a belt and pulley assembly, said primary drive shaft driving the roller chain and sprocket assembly.

25. The method of claim 18 wherein the mechanism for raising and lowering the liftable frame through the opening in the floor comprises at least one control switch within the liftable frame and at least one control switch external to the liftable frame.